

Remarks

The undersigned and the inventor thank Examiner Leurig and her supervisor, Mr. Patel, for granting a telephonic interview on September 23, 2003. During that interview, it was agreed that claim 23 as presently amended distinguishes over Tang et al., U.S. 5,294,869. During the interview a discussion of claim 30 was also held, and agreement at that time was not reached.

The specification has been amended to remove an inadvertent error.

Claim 27 has been amended so that it is consistent with claim 23.

Claims 23-29 are deemed allowable in view of the amendment to claim 23.

Claim 30 has been amended to distinguish further over the Tang et al. patent, U.S. 5,294,869. Support for amended claim 30 is found at page 3, line 2 and the process described in more detail at page 5 of the specification. As discussed during the telephonic interview of September 23, it is Applicant's view that Tang et al. is silent in dealing with the problem of parallax.

The parallax problem becomes important with large-sized substrates, i.e., display panels, for which the present invention is directed. In such larger substrates, the shadow cast by the ribs (walls) is longer for ribs that are farther from the source. Fig. 3 of the specification illustrates the problem. Solution of this problem is illustrated in Fig. 4, whereby the ribs are positioned such that "the pitch of the ribs is smaller than the pitch of the pixel, wherein the pitch of the ribs corrects for parallax in an angle evaporation process". In principle, parallax may be exactly corrected by adjusting the pitch of the ribs according to the formula disclosed in the present application at page 9, lines 13-20. Typically this is a small (a few percent) deviation from the pitch of the pixels; however, this can be a critical issue in a large, high-resolution display.

As noted above, the Tang et al. patent is silent on the topic of parallax. For small displays, created in a sufficiently large deposition chamber, the problem of parallax can be overlooked. In such a simplified case, the flux may be reasonably approximated as being collimated. The use of such an approximation may be inferred from Figs. 11-13 in Tang et al. in which the flux arrows are drawn parallel to each other -- all arriving at the same angle.

However, if the display is sufficiently large, that angle would be different for different pixels, and therefore the shadows will be of different lengths, causing misalignment of the evaporants with respect to the electrodes, see Fig. 3 of the present application.

Tang et al. show additional walls (ribs) within each pixel. The purposes of these interior walls are to provide good separation of the pixel colors and to provide a separate cathode electrode for each of the subpixels. The latter is only useful for passive matrix displays, and is not desirable for active-matrix displays. Considering these interior subpixel walls, admittedly Tang may be said to describe the situation where "the pitch of the ribs is smaller than the pitch of the pixel". Nevertheless, the pitch of these interior walls does not "correct for parallax in an angle evaporation process".


In view thereof, claim 30 as amended clearly distinguishes over Tang et al.

Prompt and favorable prosecution of the application is respectfully requested.

Respectfully submitted,

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